

REMARKS

Claims 2-12, 22-27, 32, 34-45 and 47-52 are now pending in the present application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

PERSONAL INTERVIEW

Applicant and his representative would like to thank the Examiner for the courtesies extending during the personal interview conducted on May 28, 2008. The for going amendments and following remarks are being presented in accordance with the issues discussed at the interview and in response to the pending office action.

REJECTION UNDER 35 U.S.C. § 103

Claims 2-5, 7-12, 22-27, 31-43 and 45-48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Foran (U.S. Pat. No. 5,554,252) in view of Reis *et al.* (U.S. Pat. No. 5,800,661). This rejection is respectfully traversed.

The Examiner concedes that Foran fails to disclose a vacuum system with an elongated channel but relies on the teachings of Reis for these teachings.

As discussed during the interview, the present application is directed to machine cells used in press hemming or roller hemming operations of metal panels such as those used on automotive vehicles having class-a outer finish or show surface. These hemming operations impart significant lateral forces as a peripheral flange is folded or rolled over but must not damage the show surface on the opposite side of the first sheet material. The structural configuration of the claimed machine cell is such that it supports and secures the metal panels in a manner that improves the hemming operation. Specifically, the upper surface of the lower nest has a generally flat material-

contacting area extending to its edge to enable unobstructed lateral movement of a forming tool to and across the material-contacting area. Instead of using conventional overhead rings (e.g., Foran, block member 100 or application para. 0004) or side gauges (e.g., application para. 0005) to immobilize the first metal panel, the present application employs a vacuum pad having an elongated channel and a vacuum system operable to generate a downward clamping force during the forming operation. The machine cell as claimed is able to laterally immobilize the metal panel without damaging the show surface. The difference being that it is required by Foran and Reis to have stepped formations in the material in order to immobilize their material, formations that are unacceptable in a show surface.

Applicant presents new claims 49-52 in place of previously presented claims 31, 33, 45, and 46 to more particularly point out and distinctly claim the subject matter that Applicant regards as the invention. For example, Claim 49 recites “an upper surface ... having a generally flat material-contacting area extending to a boundary of the upper surface to enable unobstructed lateral movement of a forming tool from the material-contacting area across the boundary;... a vacuum pad ... having a sealing surface defined to substantially conform to an interior region of the first metal sheet and an elongated channel formed therein; ... wherein said vacuum pad and said vacuum system are operable to generate a downward clamping force sufficient to laterally immobilize the first metal sheet during an operation clinching together the first metal panel and the second metal panel.” Applicant has also amended the dependent claims to provide proper dependency and antecedent basis for the newly presented claims.

As previously remarked, Foran fails to disclose a lower nest in which the material-contacting area is laterally accessible by the forming tool as called for in pending claims. The vertical walls on block 84 prevent lateral access to the material-contacting area. Reis *et al.* do not remedy this deficiency as the fixture disclosed therein also relies on a vertical wall 29 defined by grooves 26 to provide lateral stability. In fact, Reis discloses positioning the patterned material within the channel such that, the material-contacting portion is actually located therein and the vertical walls (much like those disclosed by Foran) block lateral access to the material-contacting portion. See, U.S. Patent No. 5,800,661, col. 4, ll. 62-63; col. 6, ll. 10-13, 25-28; col. 6, ln. 58 – col. 7, ln. 5; and FIGS 5 and 9-10.

Moreover, neither Foran nor Reis *et al.* are concerned with hemming a metal panel or the clamping requirements for this operation as provided by the claimed machine cell. As noted above, Foran employs block member 100 for holding plastic body panels together during a bonding operation, and no lateral forces are generated during the bonding operation. Reis *et al.* which is directed to an apparatus for dimensioning, manipulating or installing a patterned material draws the material down into grooves 26 for securing the patterned material 12 to the fixture, and, if necessary, holding the material in place with a peeling plate 17.

In the Final Office Action, the Examiner states that “expressions relating to the apparatus to contents thereof during an intended operation are of no significance in determining the patentability of the apparatus claim” and advised Applicant that “the concept of generating a downward clamping force...relates to an intended operation which does not impart any additional structure to the vacuum system.” pp. 3-4. Initially,

Applicant notes that this statement has no bearing on the method claims. Moreover, Applicant respectfully disagrees that the recited limitations only relate to an intended operation, but submit that recited limitations also define structural relationships relating to the apparatus.

For all of the foregoing reasons, Applicant submits that the claimed apparatus does not and could not properly result from a combination of the teachings from Reis *et al.* and Foran. Moreover, any attempt to make such a combination would be rejected as causing unacceptable damage to the finish and show surface of the first sheet material. For each of the above-stated reasons, Foran alone or in combination with Reis *et al.* fail to disclose or suggest both the structure and the function recited in the claims as originally filed and as amended and presently pending.

ALLOWABLE SUBJECT MATTER

Applicant acknowledges the Examiner's recognition that claims 6 and 44 represent allowable subject matter. In view of the foregoing amendments and remarks, Applicant has not rewritten these claims in independent form as it believes that the claims from which claims 6 and 44 depend are also directed to allowable subject matter.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and

favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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